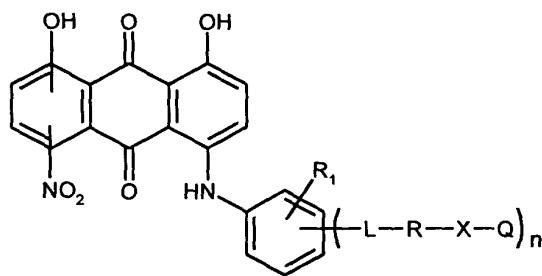


We claim:

1. An anthraquinone colorant having the structure in Formula I:

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wherein

15 L represents a covalent carbon-carbon bond or a linking group selected from the group consisting of -O-, -S-, -SO<sub>2</sub>-, -CON(R<sub>2</sub>)-, -N(COR<sub>3</sub>)-, -N(R<sub>2</sub>)CO-, and -N(SO<sub>2</sub>R<sub>3</sub>)-;

20 R is a divalent organic radical selected from the group consisting of C<sub>1</sub>-C<sub>6</sub>-alkylene; C<sub>1</sub>-C<sub>6</sub>-alkylene-Y-CH<sub>2</sub>CH<sub>2</sub>-; and {CH<sub>2</sub>CH<sub>2</sub>}<sub>m</sub>-Y-CH<sub>2</sub>CH<sub>2</sub>-;

20 R<sub>1</sub> is hydrogen or represents one or two groups selected from the group consisting of C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy and halogen.

25 R<sub>2</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl or aryl;

R<sub>3</sub> is C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl or aryl;

X is -O- or -N(R<sub>2</sub>)-;

Y is -O- -S-, -SO<sub>2</sub>-, -N(SO<sub>2</sub>R<sub>3</sub>)-, or -N(COR<sub>3</sub>)-;

n is 1 or 2;

m is 2 or 3; and

Q is an ethylenically-unsaturated photopolymerizable or free radical polymerizable group.

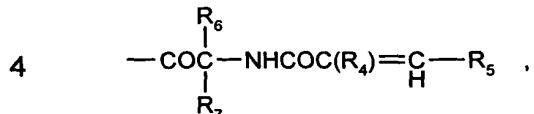
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2. A colorant according to claim 1 wherein Q is

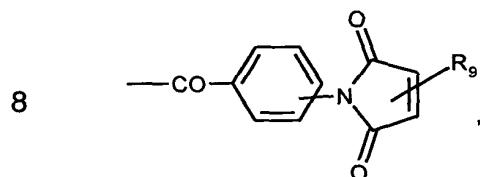
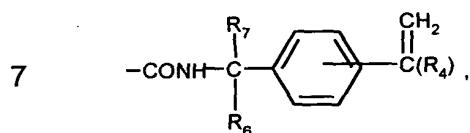
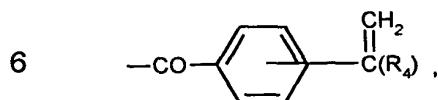
1       $-\text{COC}(\text{R}_4)=\text{CH}-\text{R}_5,$

2       $-\text{CONHCOC}(\text{R}_4)=\text{CH}-\text{R}_5,$

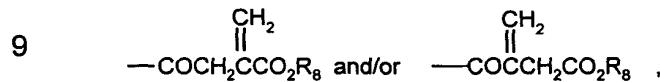
3       $-\text{CONH-C}_1\text{-C}_6\text{-alkylene-OCOC}(\text{R}_4)=\text{CH}-\text{R}_5,$



5       $-\text{COCH=CH-CO}_2\text{R}_8,$



or



wherein:

$\text{R}_4$  is hydrogen or  $\text{C}_1\text{-C}_6\text{-alkyl};$

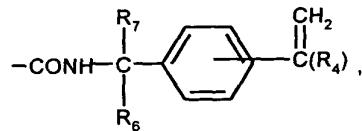
5       $\text{R}_5$  is hydrogen;  $\text{C}_1\text{-C}_6$  alkyl; phenyl; phenyl substituted with one or more groups selected from the group consisting of  $\text{C}_1\text{-C}_6\text{-alkyl}$ ,  $\text{C}_1\text{-C}_6\text{-alkoxy}$ ,  $-\text{N}(\text{C}_1\text{-C}_6\text{-alkyl})_2$ , nitro, cyano,  $\text{C}_1\text{-C}_6\text{-alkoxycarbonyl}$ ,  $\text{C}_1\text{-C}_6\text{-alkanoyloxy}$  and halogen; 1- or 2-naphthyl; 1- or 2-naphthyl substituted with  $\text{C}_1\text{-C}_6\text{-alkyl}$  or  $\text{C}_1\text{-C}_6\text{-alkoxy}$ ; 2- or 3-thienyl; 2- or 3-thienyl substituted with  $\text{C}_1\text{-C}_6\text{-alkyl}$  or halogen; 2- or 3-furyl; or 2- or 3-furyl substituted with  $\text{C}_1\text{-C}_6\text{-alkyl};$

R<sub>6</sub> and R<sub>7</sub> are, independently, hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, or aryl; or R<sub>6</sub> and R<sub>7</sub> may be combined to represent a  $\text{--CH}_2\text{--}\overset{\cdot}{\text{C}}\text{H}_2\text{--}$ <sub>3-5</sub> radical;

R<sub>8</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>8</sub>-alkenyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl or aryl; and

5 R<sub>9</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl or aryl.

3. A colorant according to claim 2, wherein R is C<sub>1</sub>-C<sub>4</sub>-alkylene, R<sub>1</sub> is hydrogen, L is -O- or a covalent bond, X is -O-, and Q is

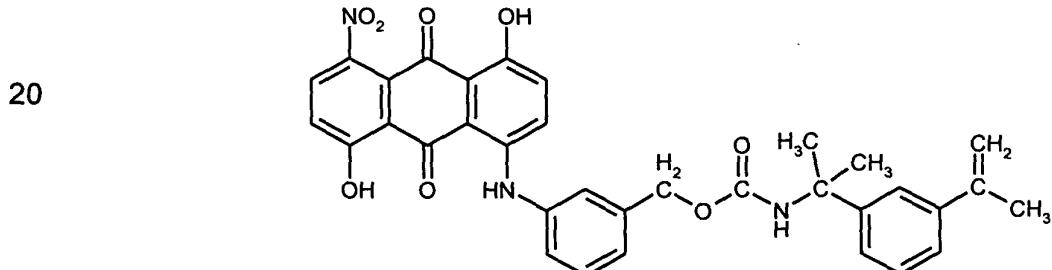


10 wherein R<sub>4</sub> is hydrogen or methyl, R<sub>6</sub> and R<sub>7</sub> are methyl, and n is 1.

4. A colorant according to claim 2, wherein R is C<sub>1</sub>-C<sub>4</sub>-alkylene, R<sub>1</sub> is hydrogen, L is -O- or a covalent bond, X is -O-, and Q is -COC(R<sub>4</sub>)=CH-R<sub>5</sub>, wherein R<sub>4</sub> is hydrogen or methyl, R<sub>5</sub> is hydrogen, and n is 1.

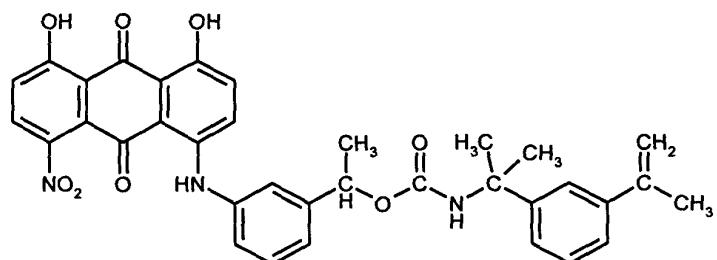
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5. A colorant according to claim 1 having the structure



6. A colorant according to claim 1 having the structure

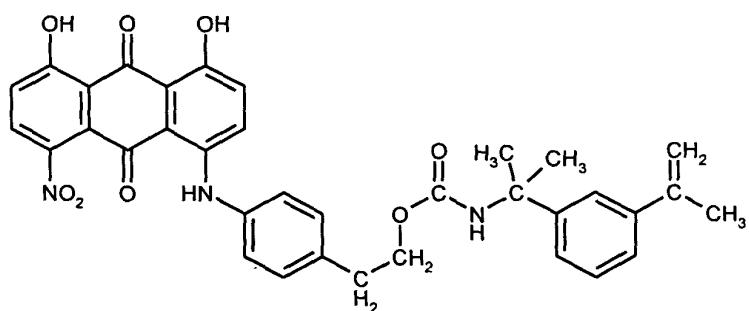
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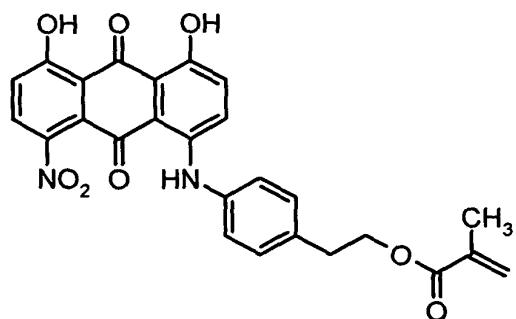
7. A colorant according to claim 1 having the structure

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8. A colorant according to claim 1 having the structure



9. A coating composition comprising (i) one or more polymerizable vinyl compounds, (ii) one or more colorant compounds according to Claim 1, and (iii) at least one photoinitiator.

5 10. A coating composition according to Claim 9 comprising (i) one or more polymerizable vinyl compounds, (ii) one or more of the colorant compounds present in a concentration of about 0.5 to 25 wt% based on the weight of component (i), and (iii) a photoinitiator present in a concentration of about 1 to 15 wt% based on the weight of the polymerizable vinyl compound(s) present in the coating composition.

10 11. A coating composition according to claim 10 which further comprises one or more organic solvents.

15 12. A coating composition according to claim 10 wherein the composition is dispersed in water.

13. A coating composition according to claim 12 which further comprises a co-solvent.

20 14. A coating composition according to Claim 10 wherein the polymerizable vinyl compounds comprise methacrylated polyesters, acrylated or methacrylated polyethers, acrylated or methacrylated epoxy polymers, acrylated or methacrylated urethanes, or mixtures thereof, in a diluent comprising monomeric acrylate or methacrylate esters.

25 15. A colorant concentrate comprising a solvent and a colorant according to Claim 1 at a concentration of about 0.5 to about 40 wt%.

16. A colorant concentrate according to claim 15 wherein the solvent is toluene, methyleethyl ketone, acetone, hexanediol diacrylate, tri(propyleneglycol) diacrylate or a mixture thereof and the colorant is present at a concentration of about 10 to about 30 wt%.

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17. A colorant concentrate according to claim 16 further comprising one or more ultraviolet light absorbing compounds at a concentration of from about 0.1 to about 30 wt %.

10 18. A colorant concentrate according to claim 16 further comprising one or more antioxidants at a concentration of about 0.01 to about 5 wt %.

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